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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/805,108

03/19/2004

Woo-Seog Park

2060-3-98

8500

35884

7590

07/20/2007

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EXAMINER

TRAN, MY CHAU T

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

07/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/805,108

Applicant(s)

PARK, WOO-SEOG

Examiner

MY-CHAU T. TRAN

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☒ Claim(s) 5,6,16,17,19,22,24 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Application and Claims Status

1. Applicant's amendments and response filed 06/01/2007 are acknowledged and entered.
2. Claims 1-33 were pending. Applicants have amended claims 1-3, 5, 6, 8, 11-13, 16, 18, 19, 21, 26, 28, 29, and 31-33. No claims were added and/or cancelled. Therefore, claims 1-33 are currently pending and are under consideration in this Office Action. Additionally, applicant has also amended the specification to correct typographical errors and figure 2.

Drawings

3. The drawing, i.e. figure 2, was received on 06/01/2007. This drawing is accepted.

Status of Claim(s) Objection(s) and /or Rejection(s)

4. The drawing objection has been withdrawn in light of applicant's amendments of figure 2 of the drawing.
5. The objection of claim 26 has been withdrawn in light of applicant's amendments of claim 26.
6. The rejections of claims 1-33 under 35 USC 112, second paragraph, as being indefinite have been withdrawn in light of applicant's amendments of claims 1-3, 5, 6, 8, 11-13, 16, 18, 19, 21, 28, 29, and 31-33.

Maintained Rejection(s)

Claim Rejections - 35 USC § 102

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claims 1-4, 7-15, 18, 20, 21, 23, 26, 28-30, 32 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakamura (US Patent 7,138,992 B2; *filing date 09/03/2002*).

For ***claim(s) 1, 7, 10, 11, 18, 20, 21, 23, and 28***, Nakamura discloses a driving circuit for a portable electronic device (see e.g. col. 1, lines 10-17; col. 3, lines 29-62; figs. 1-20). The circuit comprises an organic EL display device (ref. #21)(refers to instant claimed display), an organic EL display power source (ref. #22), a power source (ref. #23)(refers to instant claimed voltage source output), and the voltage dividing section (ref. #25)(refers to instant claimed constant voltage output)(see e.g. col. 5, lines 25-52; figs. 1 and 2). As illustrated by figure 1, both the power source (ref. #23) and the voltage dividing section (ref. #25) are use to produce the output voltage V_{OUT} via the organic EL display power source (ref. #22) to drive the organic EL display device (ref. #21). The display includes light emitting diode (LED) that illuminates the display (refers to instant claimed backlight illumination unit and instant claim 28)(see e.g. col. 3, lines 58-62; claim 5). The organic EL display power source includes a DC/DC converter (refers to instant claimed converting means/converting unit/converter and instant claims 7, 18, 23, and 28), a converter controlling section (ref. #41)(refers to instant claimed enabling means/controller), and an FET (ref. #43)(refers to instant claimed switching means/switching unit/switch, and instant claims 10, 20, and 28)(see e.g. col. 5, lines 52-54; figs. 1 and 2). The converter controlling section turns on and off the FET, i.e. applying either the voltage from the

Art Unit: 2629

voltage source or from the converting controlling section to the organic EL display device, and as a result, also controls the DC/DC converter, i.e. turn on and off the converter (see e.g. col. 5, lines 31-36 and 54-57; fig. 1).

For **claims 2, 11, 12, 21 and 26**, Nakamura discloses that converter controlling section comprises a controller (ref. #52)(refers to instant claim 26), and a comparator (ref. #53)(refers to instant claimed comparing means)(see e.g. col. 6, lines 1-14). The controller (ref. #52) based on the comparison signal from the comparator (ref. #53) turns on and off the FET, and as a result, the converter controlling section controls the DC/DC converter (see e.g. col. 5, lines 31-36 and 54-57; col. 6, lines 1-14; fig. 1).

For **claims 3, 4, and 13-15**, Nakamura discloses an output dividing section (ref. #25) that comprises resistors (ref. #61 and 64)(refers to instant claim 14) that divide the output voltage (see e.g. col. 6, lines 40; fig. 1). The factor use for dividing the output voltage has a range from $5/15$ to $5/8$ (33% to 65%)(refers to instant claimed approximately 50%)(see e.g. col. 7, lines 24-53).

For **claims 8 and 9**, Nakamura discloses FET Q_1 and Q_2 (refers to instant claimed second enabling means /transistor) that control the LED independent of the converting means (see e.g. col. 6, lines 15-67; col. 7, line 65 thru col. 8, line 35).

For **claims 28-30, 32, and 33**, Nakamura discloses the method of driving the display wherein the method comprises the steps of generating constant voltage output; measuring the voltage source output; applying one of the output voltage source output and the constant voltage output to the backlight illumination unit, wherein the voltage source output is applied to the illumination unit if the voltage source output at least a predetermined value and the constant

voltage output is applied to the backlight illumination unit if the voltage source output is below the predetermined value. (see e.g. col. 5, lines 25-36 and 48-56; col. 6, lines 1-14; col. 7, lines 24-53). The constant voltage of the converting means is at least the predetermine value (see e.g. col. 6, lines 1-14). Additionally, Nakamura discloses the step of controlling the LED independent of the converting means (refers to instant claim 33)(see e.g. col. 6, lines 15-67; col. 7, line 65 thru col. 8, line 35).

Therefore, the apparatus of Nakamura do anticipate the instant claimed invention.

Response to Arguments

9. Applicant's arguments directed to the above 102 rejection were considered but they are not persuasive for the following reasons. Please note that the above rejection has been modified from it original version to more clearly address applicant's newly amended and/or arguments.

[1] Applicant contends that the apparatus of Nakamura does not anticipate the instant claimed invention because the reference of Nakamura does not teach or suggest the limitation of '*switching between output of the voltage source and the constant voltage as the source of power for the backlight illumination unit*'.

[2] Applicant alleges that the apparatus of Nakamura does not anticipate the instant claimed invention because the reference of Nakamura disclose that '*the switching means /switching unit /switch is turned off and on by the enabling means /controller*', which is not recited in the instant claims.

This is not found persuasive for the following reasons:

[1] The examiner respectfully disagrees. It is the examiner's position that the apparatus of Nakamura does anticipate the instant claimed invention because the reference of Nakamura

Art Unit: 2629

does suggest the limitation of *'switching between output of the voltage source and the constant voltage as the source of power for the backlight illumination unit'*. Nakamura disclose that the output voltage V_{OUT} used to drive the organic EL display device (ref. #21) is from the power source (ref. #23) and the voltage dividing section (ref. #25) via the organic EL display power source (ref. #22), i.e. both the power source (ref. #23)(refers to instant claimed voltage source output) and the voltage dividing section (ref. #25)(refers to instant claimed constant voltage output) supply voltage to the organic EL display power source (ref. #22) that produce the output voltage V_{OUT} used to drive the organic EL display device (ref. #21)(see col. 5, lines 25-31 and fig. 1). As depicted by figure 1, the organic EL display power source (ref. #22) comprises a converter controlling section (ref. #41)(refers to instant claimed enabling means/controller), and an FET (ref. #43)(refers to instant claimed switching means/switching unit/switch) that direct the voltage supply by the voltage dividing section (ref. #25), i.e. *'switching between output of the voltage source and the constant voltage as the source of power for the backlight illumination unit'*, (see col. 5, lines 25-67). Accordingly, the reference of Nakamura does suggest the limitation of *'switching between output of the voltage source and the constant voltage as the source of power for the backlight illumination unit'*.

[2] The examiner respectfully disagrees. It is the examiner's position that the apparatus of Nakamura does anticipate the instant claimed invention because although the instant claims does not recite that *'the switching means /switching unit /switch is turned off and on by the enabling means /controller'* as disclosed by Nakamura, the comprising language of the instant claims would not exclude this teaching of Nakamura. See MPEP § 2111.03, which states:

The transitional term "**comprising**", which is synonymous with "including," "containing," or "characterized by," is **inclusive or open-ended and does not exclude additional, unrecited elements or method steps**. See, e.g., > *Mars Inc. v. H.J. Heinz Co.*, 377 F.3d 1369, 1376, 71 USPQ2d 1837, 1843 (Fed. Cir. 2004) ("like

Art Unit: 2629

the term comprising,' the terms containing' and mixture' are open-ended." < *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed. Cir. 2003) ("The transition comprising' in a method claim indicates that the claim is open-ended and allows for additional steps.")

Therefore, the teachings of Nakamura do anticipate the apparatus of the instant claims, and the rejection is maintained.

10. Claims 1, 2, 7, 11, 12, 18, 21, 23, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Hartular (US Patent 6,873,322; *filing date 06/07/2002*).

For ***claims 1, 2, 7, 11, 12, 18, 21, 23, and 27***, Hartular discloses an adaptive LCD (liquid crystal display) power supply circuit and an electronic device (see e.g. Abstract; col. 1, line 49 thru col. 2, line 6). As illustrated in figure 1, the electronic device comprises power source (refers to instant claimed a constant voltage output), an adaptive LCD power supply circuit, and an LCD (refers to instant claimed display and instant claim 27)(see e.g. col. 1, line 63 thru col. 6; col. 2, line 56 thru col. 3, line 16; col. 4, lines 3-6). As illustrated in figure 2, the adaptive LCD power supply circuit comprises a regulating circuit and a sensor (see e.g. col. 3, line 38-50). The regulating circuit comprises a DC/DC converter (refers to instant claimed converting means/converting unit/converter and claims 7, 18, and 23); a pulse width modulated (PWM) switching circuit; and a comparator (refers to instant claimed comparing means) that generate the PWM signal (see e.g. col. 3, lines 51-65). As illustrated in figure 3, the adaptive LCD power supply circuit comprises a light source such as the light emitting diode (LED)(refers to instant claimed backlight illumination unit), a switch (ref. #313)(refers to instant claimed switching means), a current source (re. #319)(refers to instant claimed voltage source output) and a the minimum decision circuit (ref. #320)(refers to instant claimed enabling means/controller)(see e.g. col. 4, line 1 thru col. 5, line 10). The minimum decision circuit controls the switch and the

DC/DC converter, i.e. turn on and off, that base on the signal generated by the comparator (see e.g. col. 4, lines 36-55).

Therefore, the device of Hartular does anticipate the instant claimed invention.

Response to Arguments

11. Applicant's arguments directed to the above 102 rejection were considered but they are not persuasive for the following reasons. Please note that the above rejection has been modified from it original version to more clearly address applicant's newly amended and/or arguments.

[1] Applicant contends that Hartular does not anticipate the instant claimed invention because the reference of Hartular does not teach or suggest the limitation of '*switching between output of the voltage source and the constant voltage as the source of power for the backlight illumination unit*'.

[2] Applicant alleges that Hartular does not anticipate the instant claimed invention because the reference of Hartular does not teach or suggest '*that the "DC/DC converter 303," or the device analogous to converting means/converting unit/converter, is turned off and on by or the "minimum decision circuit 320," or the device analogous to the enabling/means/controller*'.

[3] Applicant argues that Hartular does not anticipate the instant claimed invention because the reference of Hartular disclose that '*the switching means/switching unit/switch turns off and on*' the claimed backlight illumination unit, which is not recited in the instant claims, i.e. there is '*no recitation in the claims that the backlight illumination unit is turned off and on*'.

This is not found persuasive for the following reasons:

[1] The examiner respectfully disagrees. It is the examiner's position that the apparatus of Hartular does anticipate the instant claimed invention because the reference of Hartular does

Art Unit: 2629

suggest the limitation of *'switching between output of the voltage source and the constant voltage as the source of power for the backlight illumination unit'*. Hartular disclose that the LED (ref. #318) can function as a backlight for an LCD panel wherein the voltage supply to the LED via the current source (ref. #319)(i.e. provide the voltage refers to instant claimed voltage source output) and the power source (ref. #302)(i.e. provide the voltage refers to instant claimed a constant voltage output) and the voltage path is control via the switch (ref. #313), i.e.

'switching between output of the voltage source and the constant voltage as the source of power for the backlight illumination unit' (see e.g. col. 3, line 66 thru col. 4, line 19; col. 4, line 56 thru col. 5, line 10; fig. 3). Consequently, the reference of Hartular does suggest the limitation of *'switching between output of the voltage source and the constant voltage as the source of power for the backlight illumination unit'*.

[2] The examiner respectfully disagrees. It is the examiner's position that the apparatus of Hartular does anticipate the instant claimed invention because the reference of Hartular does suggest *'that the "DC/DC converter 303," or the device analogous to converting means/converting unit/converter, is turned off and on by or the "minimum decision circuit 320," or the device analogous to the enabling/means/controller'*. Hartular disclose that the decision circuit (ref. #320) provide the signal that control the DC/DC converter (ref. #303) which suggest the limitation of *"converting means/converting unit/converter is turned off and on by the enabling/means/controller"*. Thus, the reference of Hartular does suggest *'that the "DC/DC converter 303," or the device analogous to converting means/converting unit/converter, is turned off and on by or the "minimum decision circuit 320," or the device analogous to the enabling/means/controller'*.

Art Unit: 2629

[3] The examiner respectfully disagrees. It is the examiner's position that the apparatus of Hartular does anticipate the instant claimed invention because although the instant claims does not recite that '*the switching means/switching unit/switch turns off and on*' the claimed backlight illumination unit as disclosed by Hartular, the comprising language of the instant claims would not exclude this teaching of Hartular. See MPEP § 2111.03, which states:

The transitional term "**comprising**", which is synonymous with "including," "containing," or "characterized by," **is inclusive or open-ended and does not exclude additional, unrecited elements or method steps.** See, e.g., > *Mars Inc. v. H.J. Heinz Co.*, 377 F.3d 1369, 1376, 71 USPQ2d 1837, 1843 (Fed. Cir. 2004) ("like the term comprising,' the terms containing' and mixture' are open-ended.") < *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 327 F.3d 1364, 1368, 66 USPQ2d 1631, 1634 (Fed. Cir. 2003) ("The transition comprising' in a method claim indicates that the claim is open-ended and allows for additional steps.")

Therefore, the teachings of Hartular do anticipate the invention of the instant claims, and the rejection is maintained.

Allowable Subject Matter

12. Claims 5, 6, 16, 17, 19, 22, 24, and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

Art Unit: 2629

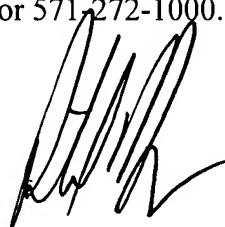
will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MY-CHAU T. TRAN whose telephone number is 571-272-0810. The examiner can normally be reached on Monday: 8:00-2:30; Tuesday-Thursday: 7:30-5:00; Friday: 8:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/My-Chau T. Tran/
Patent Examiner
Art Unit 2629
July 16, 2007



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